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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,779	08/09/2001	Michael L. Roukes	45129/RAG/C766	5454
23363	7590	09/21/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			LAM, ANN Y	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	
			1641	
DATE MAILED: 09/21/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,779

Applicant(s)

ROUKES ET AL.

Examiner

Ann Y. Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 33-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-26 and 33-60 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Restriction Requirement

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-4, 11-36, 53, 54, drawn to an embodiment with one resonator and a detector measuring damping of resonance motion, classified in class 436, subclass 523.

II. Claims 1, 53, 5, 37, 40, 42, 43, 46, 47, 49 and 50, drawn to an embodiment with a resonator and a substrate biofunctionalized with a ligand, and a detector for measuring dampening of resonance motion, classified in class 436, subclass 518.

III. Claims 1, 53, 6, 37, 40, 41, 43, 47, 49-52, drawn to a resonator and a substrate biofunctionalized with a receptor, and a detector for measuring dampening of resonance motion, classified in class 436, subclass 524.

IV. Claims 1, 53, 7, 8, 44, drawn to two resonators, with one resonator biofunctionalized with a receptor, and a detector for measuring dampening of resonance motion, classified in class 422, subclass 55.

V. Claims 1, 53, 9, 10, 45, drawn to two resonators, with one resonator biofunctionalized with a ligand, and a detector for measuring dampening of resonance motion, classified in class, 435, subclass 4.

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VI. Claims 1, 53, claims 9, 10, drawn to two driver resonators and a follower resonator, and a detector for measuring dampening of resonance motion, classified in class 331, subclass 47.

VII. Claims 37-40, 42, 43, 46-50, 55-60, drawn to a resonator and a substrate biofunctionalized with a ligand, and a detector for measuring force constant, classified in class 435, subclass, 287.2.

VIII. Claims 37, 40, 41, 43, 47-52, 55-60, drawn to a resonator and a substrate biofunctionalized with a receptor, and a detector for measuring force constant, classified in class 435, subclass 7.1.

IX. Claim 44, drawn to two resonators, with one resonator biofunctionalized with a receptor, and a detector for measuring force constant, classified in class 331, subclass 116R.

X. Claim 45, drawn to two resonators, with one resonator biofunctionalized with a ligand and a detector measuring force constant, classified in class 359, subclass 199.

Inventions (I-VI) and (VII-X) are unrelated and patentably distinct and separate inventions. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together and they have different modes of operation because invention I-VI requires a detector measuring damping of

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resonance motion, which is not required by inventions VII-X. Inventions VII-X requires a detector measuring a force constant, which is not required by inventions VII-X.

Invention I and (II-X) are unrelated and patentably distinct and separate inventions because they are not disclosed as capable of use together and they have different modes of operation. Invention I needs only one resonator whereas inventions II-X requires another resonator or a substrate.

Inventions (II and VII) and (III-VI, VIII-X) are unrelated and patentably distinct and separate inventions because they are not disclosed as capable of use together and they have different modes of operation. Invention II and VII requires a substrate biofunctionalized with a ligand, whereas inventions III-X do not. Invention III and VII requires a substrate biofunctionalized with a receptor, whereas inventions II and VII do not. Inventions IV and IX requires a second resonator with a receptor, whereas invention II and VII do not. Invention V and X requires a second resonator with a ligand, whereas inventions II and VII do not. Invention VI requires 2 driver resonators and a follower resonator, whereas inventions II and VII do not.

Inventions (III and VIII) and inventions (IV-VI, IX and X) are unrelated and patentably distinct and separate inventions because they are not disclosed as capable of use together and they have different modes of operation. Inventions III and VIII requires a substrate biofunctionalized with a receptor, whereas inventions IV-VI, IX and X do not. Inventions IV and IX requires a second resonator with a receptor whereas inventions III and VIII do not. Inventions V and X requires a second resonator with a

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ligand whereas inventions III and VIII do not. Invention VI requires two resonator drivers and a follower driver, whereas inventions III and VIII do not.

Inventions (IV and IX) and inventions (V, VI and X) are unrelated and patentably distinct and separate inventions because they are not disclosed as capable of use together and they have different modes of operation. Inventions IV and IX require a second resonator with a receptor whereas inventions V, VI and X do not. Inventions V and X requires a second resonator with a ligand, whereas inventions IV and IX do not. Invention VI requires two driver resonator and one follower resonator, whereas inventions IV and IX do not.

Inventions (V and X) and invention VI are unrelated and patentably distinct and separate inventions because they are not disclosed as capable of use together and they have different modes of operation. Inventions V and X requires a second resonator with a ligand whereas invention VI does not. Invention VI requires two driver resonators and a follower resonator whereas inventions V and X do not.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for one group is not required for the other groups, restriction for examination purposes as indicated is proper.

(The above restriction requirement is based on the different inventions claimed with respect to the different types and arrangements of resonators as well as the

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different types of detectors (see also specification pages 6-7 describing multiple inventions. Upon consideration of the amendments and new claims, Examiner finds that the search and consideration of each invention listed above is seriously burdensome.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Y. Lam whose telephone number is 571-272-0822. The examiner can normally be reached on M-Sat 11-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.L. 


LONG V. LE
SUPERVISORY PATENT EXAMINER
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09/18/05